Amendment To The Claims:

1. (Currently amended) A method for performing a measurement in a network comprising:

creating an Internet Protocol Measurement Protocol (IPMP) packet by a measurement host, said IPMP packet including at least one data field;

including in the IPMP packet instructions in one or more control fields for a recipient of the IPMP packet;

encapsulating the IPMP packet in an Internet Protocol (IP) datagram and a predetermined link layer protocol; and

sending the IPMP packet into the network from the measurement host,

wherein said instructions include an instruction to insert a time stamp by a recipient network device which is a recipient of the IPMP packet and

wherein said additional details include when the time stamp occurred relative to an arrival of the IPMP packet at the recipient network device.

2. (Original) The method according to claim 1, further comprising:

identifying the IPMP packet upon receipt by a recipient network device; and

examining a contents of the IPMP packet for instructions before forwarding the IPMP packet by the recipient network device.

3. Canceled.

4. (Currently amended) The method according to claim 1 [[3]], wherein said instructions include an instruction to insert additional data providing further details about the time stamp.

5. Canceled.

6. (Currently amended) The method according to claim 1 [[3]], wherein said additional details include an accuracy and/or precision of a clock from which the time stamp originated.

7. (Currently amended) The method according to claim 1 [[3]], wherein said additional details include a network address via which one can obtain further details about the time stamp.

8. (Original) The method according to claim 1, wherein said instructions include an instruction to insert a path record.

9. (Original) The method according to claim 1, wherein said instructions include an instruction not to insert a path record.

10. (Currently amended) The method according to claim 1, wherein said instructions include an instruction not to insert a time stamp by [[the]] a recipient network device.

11. (Original) The method according to claim 1, further comprising:

analyzing by the measurement host information included in one or more of the following: a reply, an absence of a reply, a delay between the IPMP packet and an IPMP echo reply packet, a value of a time to live value in an IPMP echo reply packet, a path record, and a presence of one or more errors in an IPMP echo reply packet.

12. (Original) The method according to claim 1, wherein the IPMP packet includes authentication data.

13. (Original) The method according to claim 1, wherein the instructions in the IPMP packet include a time to live value to be decremented by each recipient of the IPMP packet until the time to live value reaches zero, in which case one or more predetermined actions will occur.

14. (Original) The method according to claim 13, wherein at least one of the one or more predetermined actions is specified in the instructions.

15. (Original) The method according to claim 13, wherein at least one of the one or more predetermined actions is undertaken by a recipient of the IPMP packet on its own.

16. (Currently amended) An apparatus for performing a measurement in a network comprising:

a processor to couple to the network; and

a memory to store computer readable instructions causing [[a]] the processor to:

create an Internet Protocol Measurement Protocol (IPMP) packet, said IPMP packet including at least one data field;

include in the IPMP packet instructions in one or more control fields for a recipient of the IPMP packet; encapsulate the IPMP packet in an Internet Protocol (IP) datagram and a predetermined link layer protocol; and

send the IPMP packet into the network,

wherein said instructions include an instruction to insert a time stamp by a recipient network device which is a recipient of the IPMP packet and

wherein said additional details include when the time stamp occurred relative to an arrival of the IPMP packet at the recipient network device.

17. (Original) The apparatus according to claim 16, further comprising: a network device coupled to the network, identifying the IPMP packet upon receipt and examining a contents of the IPMP packet for instructions before forwarding the IPMP packet.

18. (Original) The apparatus according to claim 16, wherein the processor analyzes information included in one or more of the following: a reply, an absence of a reply, a delay between the IPMP packet and an IPMP echo reply packet, a

value of a time to live value in an IPMP echo reply packet, a path record, and a presence of one or more errors in an IPMP echo reply packet.

19. (Currently amended) A computer readable media having stored thereon computer readable instructions causing a processor to:

create an Internet Protocol Measurement Protocol (IPMP) packet, said IPMP packet including at least one data field;

include in the IPMP packet instructions in one or more control fields for a recipient of the IPMP packet;

encapsulate the IPMP packet in an Internet Protocol (IP) datagram and a predetermined link layer protocol; and

send the IPMP packet into the network,

wherein said instructions include an instruction to insert a time stamp by a recipient network device which is a recipient of the IPMP packet and

wherein said additional details include when the time stamp occurred relative to an arrival of the IPMP packet at the recipient network device.